

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Bufo woodhousii woodhousii* (Girard) Smith

COMMON NAME: Woodhouse's toad, Rocky Mountain toad, Western Woodhouse's toad

SYNONYMS: *Bufo lentiginosus* var. *woodhousei* Yarrow, *B.l. woodhousei* Cope, *B.l. woodhousii* Stejneger, *B.l. woodhousi* Nieden, *B. compactilis woodhousii* Linsdale, *B. woodhousei woodhousei* Shannon and Lowe, *Anaxyrus woodhousii woodhousii* (Girard, 1854),

FAMILY: Anura: Bufonidae

AUTHOR, PLACE OF PUBLICATION: *Bufo woodhousii* Girard, Proc. Acad. Nat. Sci. Philadelphia, Vol. 7, p. 86. 1854. *Bufo woodhousii woodhousii* Smith, Am. Midl. Nat., 15: 456. 1934.

TYPE LOCALITY: “[Territory of] New Mexico, having so far been found in the province of Sonora, and in the San Francisco Mts.”; data for specimen given as “San Francisco Mountain, New Mexico [now Coconino County, Arizona]” by Stejneger, 1890, N. Am. Fauna, 3: 116.

TYPE SPECIMEN: Holotype: USNM 2531 (same type as *Bufo dorsalis* Hallowell) according to Kellogg, 1932, Bull. U.S. Natl. Mus., 160: 73, and Cochran, 1961, Bull. U.S. Natl. Mus., 220: 37.

TAXONOMIC UNIQUENESS: Genus essentially world wide, more than 250 species; *B. woodhousii* is a widespread species with 3 recognized subspecies of which 2 occur in Arizona *B.w. australis* (Southwestern Woodhouse toad), *B.w. woodhousii*. There is debate on the validity of any taxonomic rank for the third subspecies, *B. w. velatus*. Some authorities do not recognize subspecies of *Bufo woodhousii*, referring to this toad as Woodhouse's Toad. Still other authorities recognize the only subspecies occurring in Arizona as *B.w. australis*.

DESCRIPTION: A large toad, averaging 2.25-4 in (5.7-10.2 cm) in length, with dry, warty skin. The average size of males is smaller than females. A prominent cranial crest is present, sometimes with a boss between them, which contact the elongated, divergent parotoid glands. Gray, brownish, olive, greenish, yellow above, with dark blotches, a whitish stripe on the middle of the back to the snout, and a network of black and yellow on the rear of the thighs. Below is pale cream or beige, with or without dark spots. Young may have no dorsal strip. Male's throat is sooty. (CaliforniaHerps.com 2000-2006).

For the species: A fairly large toad with lengths from 1.75-5 inches long. White dorsal stripe, prominent cranial crests, and elongate, divergent paratoids. Dorsum colored gray, yellowish brown, olive, or blackish, usually with dark blotches. Yellow and black network on rear of thighs. Cream to beige below, with or without dark flecks. Larvae are generally black, although the ventor of the tail is pale. (Stebbins, 2003).

AIDS TO IDENTIFICATION: Distinct narrow crests, separated by a trough toward the front. Tends to lack stripe on snout and to have well-developed black markings on each side of chest. *B.w. australis* and *B.w. velatus* have dark markings on the chest, whereas *B.w. woodhousii* has a chest without dark markings.

ILLUSTRATIONS: Black and white drawing (Stebbins 2003: plate 14)
Color photo (Behler and King 1979: plates 224, 248, 249)
Color photo (Erik F. Enderson, in <http://www.arts.arizona.edu/herp/BUFO.html>)
Color photo of full species (Charles R. Peterson, in <http://www.pwrc.usgs.gov/ARMIatlas/species.cfm?recordID=173476>)
Color photo of *B. woodhousii* tadpole (Charlotte C. Corkran, in <http://www.fs.fed.us/r4/amphibians/woodhousetoad.htm>)
Color photos (in CaliforniaHerps.com)
Color photos (Suzanne L. Collins, Center for North American Herp., in <http://www.livingunderworld.org/gallery/photos/anura/bufo/bufo/woodhousii/>)
Color photo (Suzanne L. Collins, 2004, in CNAH at <http://www.cnah.org/detail.asp?id=1095>)
Color photos and distribution map (In USGS, NPWRC at <http://www.npwrc.usgs.gov/narcam/idguide/bwood.htm>)

TOTAL RANGE: For the species, occurs throughout most of central and southwestern United States.

RANGE WITHIN ARIZONA: Occurs in north-central, north-eastern, extreme northwestern part of state; absent for southern and western Arizona (see map in USGS Northern Prairie Wildlife Research Center, 2002). Also known from the lower Colorado River and in agriculture areas near Yuma.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: The Woodhouse's toad is predominantly nocturnal (although diurnal activity is not uncommon) and burrows underground or hides under rocks and plants when active. They are inactive during cold months of fall, winter and early spring. The call is an explosive and nasal "waaaah" resembling a sheep's call or a baby's scream, and lasting from 1-3.5 seconds. They migrate up to several hundred meters between breeding pools and adjacent nonbreeding terrestrial habitats (NatureServe 2006). Predators of adults include

bullsnakes (*Pituophis melanoleucus*), rat snakes (*Elaphe* sp.), American bullfrogs, hawks, roadrunners, and small mammals, possibly skunks (Sullivan, in Lannoo ed., 2005).

Bufo woodhousii and *B. punctatus* sometimes hybridize in northern Arizona (Malmos et al. 1995, in NatureServe 2006). And where their range overlaps, *B. woodhousii* hybridizes with *B. microscaphus* (Arizona toad), (Sullivan, 1997). “Hybridization has been documented between Woodhouse’s toads and both Colorado River toads (*B. alvarius*) and Great Plains toads (*B. cognatus*) in Arizona (Gergus et al., 1999), ... Arizona toads in Arizona and Utah (Sullivan and Lamb, 1988; Sullivan, 1995), red-spotted toads in northern Arizona and southern Colorado (Malmos et al., 1995), ... Hybrids are generally easily identified by their morphology (intermediate to parentals) and aberrant calls.” (Sullivan, in Lannoo ed., 2005).

REPRODUCTION: For the species, they breed March-July (sometimes as late as early September; varies geographically) in quiet waters of streams, marshes, lakes, freshwater pools and irrigation ditches, usually during or soon after rains; CaliforniaHerp.com (2000-2006) reports season from February to August. Breeding choruses may last a few weeks. Fertilization is external. The eggs are pigmented and laid in two long intertwined strands of up to 25,000 eggs and attached to submerged vegetation or debris. Tadpoles metamorphose in about 1-2 months. In central Arizona, the length of the larval period was 8 weeks for pond breeding populations (Sullivan pers. obs.), whereas development lasted 5-7 weeks in Oklahoma (Bragg 1940b, in Sullivan, in Lannoo ed. 2005). Metamorphosis begins at a tadpole length of about 30 mm total length; recently metamorphosed toadlets average 12-15 mm SVL (Sullivan, in Lannoo ed. 2005). Sexual maturity reached in (1-)2-3 years.

FOOD HABITS: Tadpoles eat organic debris, algae, suspended matter and plant tissue. Adults eat a variety of small terrestrial insects, especially ants and beetles, but also including sowbugs, scorpions, bees, insect larvae, and spiders. Typical of most frogs and toads, the prey is located by vision, and then a large sticky tongue is used to catch the prey and bring it into the mouth.

HABITAT: Prefers sandy areas near a water source. In Arizona, occurs primarily in desert-grassland and desert areas, along courses of rivers and permanent or semi-permanent streams. Occasionally found at permanent lakes and ponds and in urban areas. For the species, larvae are often observed in large aggregations in stream and pond habitats, typically in standing water, resting on muddy substrate (Sullivan, in Lannoo, ed. 2005).

ELEVATION: For the full species, elevation ranges from below seas level to 8,500 feet (2,593 m).

PLANT COMMUNITY: Desert-grassland, sagebrush flats, desert stream communities, woodlands.

POPULATION TRENDS: Unknown. According to NatureServe (2006), for the species at the global level, they are common and widespread; no evidence of significant regional or rangewide declines, generally due to its tolerance of various kinds of habitat disturbance.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: LC at full species (Least Concern – IUCN Red List, 2006)

MANAGEMENT FACTORS: The full species may be threatened locally by human-caused habitat degradation and destruction, and by mortality on roads near breeding sites (NatureServe 2006).

PROTECTIVE MEASURES TAKEN: Arizona fishing license required to take any amphibian.

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

The genus name *Bufo* refers to toad, while the species name *woodhousii* refers to Samuel W. Woodhouse.

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